

CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

- 1 1. An article carrying carton with two ends loaded with a plurality of articles
2 comprising:
3 (a) said carton having a bottom panel, top panel and foldably attached
4 adjoining side panels with at least one end being an interlocking end which is closed by a
5 top end flap foldably attached to the top panel, a bottom end flap foldably attached to the
6 bottom panel and a side end flap with an inside and outside which is foldably attached to
7 each side panel, with each side end flap having a slit in an end remote from the side panel
8 to which said side end flap is attached, with said end flaps being held together by closing
9 means;
10 (b) two layers of articles with at least two rows of articles in each
11 layer;
12 (c) an interlocking separator pad with two ends, of which at least one
13 end is an interlocking end which is adjacent an interlocking end of the carton, said pad
14 being located between the two layers of articles with each interlocking end of the pad
15 having a foldably attached leading flap with the leading flap extended through the slit in
16 each side end flap on the interlocking end of the carton and interlocked with the side end
17 flaps, with the leading flap being in a plane perpendicular to the bottom panel of the
18 carton and being located on the outside of said side end flaps; and
19 (d) means for closing the other end of the carton.

- 1 2. The carton loaded with a plurality of articles of Claim 1, in which the
2 means for closing the interlocking end of the carton is by gluing the top end flap and
3 bottom end flap to the side end flaps, and the other end of the carton is closed by a top
4 end flap foldably attached to the top panel and a bottom end flap foldably attached to the
5 bottom panel and a side end flap foldably attached to each side panel, with the other end

6 of the carton being closed by gluing the top end flap and bottom end flap to the side end
7 flaps.

1 3. The carton loaded with a plurality of articles of Claim 1, in which one end
2 of the interlocking pad is an interlocking end and the other end has a foldably attached
3 trailing flap which is located in a plane perpendicular to said pad and extends at least
4 close to a panel of the carton that is parallel to said pad so as to better separate and
5 support the articles in the carton.

1 4. The carton loaded with a plurality of articles of Claim 1, in which both
2 ends of the carton are interlocking ends with both ends of the interlocking separator pad
3 being interlocking ends and in which the means for closing the interlocking ends of the
4 carton is by gluing the top end flap and bottom end flap to the side end flaps.

1 5. The carton loaded with a plurality of articles of Claim 3, in which the
2 articles are cylindrical containers with two ends with an axis extending between the two
3 ends, said axes of the cylindrical containers being perpendicular to the separator pad.

1 6. The carton loaded with a plurality of articles of Claim 4, in which the
2 articles are cylindrical containers with two ends with an axis extending between the two
3 ends, said axes of the cylindrical containers being perpendicular to the separator pad.

1 7. The carton loaded with a plurality of cylindrical containers of Claim 5,
2 said carton having a dispenser flap which when removed provides an opening which
3 permits the removal of the containers from each layer, said dispenser flap formed by a
4 bottom tear line in a side panel which is at least substantially parallel to an end of the
5 carton and a top tear line spaced apart from said bottom tear line and is at least
6 substantially parallel thereto, said bottom and top tear lines extending into the adjoining
7 top panel and interconnecting each other and extending into the adjoining bottom panel

8 and interconnecting each other, said parallel tear lines being spaced apart by a distance
9 sufficient to permit the removal through said opening of a container by a person.

1 8. The carton loaded with a plurality of cylindrical containers of Claim 7, in
2 which said bottom tear line in the side panel of the carton is located from the closest side
3 end flap by a distance which is sufficient to prevent a container adjacent the closest side
4 end flap from rolling out of the opening formed when the dispenser flap is removed when
5 the carton is resting on the end where said side end flap is located, but with said bottom
6 tear line not being so far from said closest side end flap to prevent the removal through
7 said opening of a container adjacent said closest side end flap.

1 9. The carton loaded with a plurality of cylindrical containers of claim 8, in
2 which the tear lines that extend into the adjoining bottom panel and adjoining top panel
3 of the carton extend into each said panel far enough to permit a person to grasp the
4 adjacent end of a container through the opening formed when the dispenser flap is
5 removed.

1 10. The carton loaded with a plurality of cylindrical containers of Claim 9, in
2 which a tear line interconnects said bottom tear line and top tear line in said side panel of
3 the carton to facilitate opening said dispenser flap.

1 11. The carton loaded with a plurality of cylindrical containers of Claim 10,
2 which has at least one finger flap in the dispenser flap adjacent to the tear line connecting
3 the top and bottom tear lines together in said side panel to facilitate tearing the dispenser
4 flap open.

1 12. The carton loaded with a plurality of cylindrical containers of Claim 11,
2 which has a tear line in the bottom panel between the bottom tear line and the closest
3 bottom end flap and a tear line in the top panel between the bottom tear line and the
4 closest top end flap to enable a person to move that portion of the side panel between the

5 bottom tear line and the closest side end flap a sufficient distance to permit the easy
6 removal of containers from the opening formed by the removal of the dispenser flap.

1 13. The carton loaded with a plurality of cylindrical containers of Claim 6,
2 said carton having a dispenser flap which when removed provides an opening which
3 permits the removal of the containers from each layer, said dispenser flap formed by a
4 bottom tear line in a side panel which is at least substantially parallel to an end of the
5 carton and a top tear line spaced apart from said bottom tear line and is at least
6 substantially parallel thereto, said bottom and top tear lines extending into the adjoining
7 top panel and interconnecting each other and extending into the adjoining bottom panel
8 and interconnecting each other, said parallel tear lines being spaced apart by a distance
9 sufficient to permit the removal through said opening of a container by a person.

1 14. The carton loaded with a plurality of cylindrical containers of Claim 13, in
2 which said bottom tear line in the side panel of the carton is located from the closest side
3 end flap by a distance which is sufficient to prevent a container adjacent the closest side
4 end flap from rolling out of the opening formed when the dispenser flap is removed when
5 the carton is resting on the end where said side end flap is located, but with said bottom
6 tear line not being so far from said closest side end flap to prevent the removal through
7 said opening of a container adjacent said closest side end flap.

1 15. The carton loaded with a plurality of cylindrical container of Claim 14, in
2 which the tear lines that extend into the adjoining bottom panel and adjoining top panel
3 of the carton extend into each said panel far enough to permit a person to grasp the
4 adjacent end of a container through the opening formed when the dispenser flap is
5 removed.

1 16. The carton loaded with a plurality of cylindrical containers of Claim 15, in
2 which a tear line interconnects said bottom tear line and top tear line in said side panel of
3 the carton to facilitate opening said dispenser flap.

1 17. The carton loaded with a plurality of cylindrical containers of Claim 16,
2 which has at least one finger flap in the dispenser flap adjacent to the tear line connecting
3 the top and bottom tear lines together in said side panel to facilitate tearing the dispenser
4 flap open.

1 18. The carton loaded with a plurality of cylindrical containers of Claim 17,
2 which has a tear line in the bottom panel between the bottom tear line and the closest
3 bottom end flap and a tear line in the top panel between the bottom tear line and the
4 closest top end flap to enable a person to move that portion of the side panel between the
5 bottom tear line and the closest side end flap a sufficient distance to permit the easy
6 removal of containers from the opening formed by the removal of the dispenser flap.

1 19. The carton loaded with a plurality of cylindrical containers of Claim 5,
2 which carton has a dispenser flap in one end of the carton which when removed creates
3 an opening which permits the removal of containers from each layer, said dispenser flap
4 being formed by a tear line that extends through the bottom end flap to the bottom panel
5 and turns toward the side panel upon which the carton is designed to rest when
6 dispensing containers, said tear line extending to said side panel, said tear line also
7 extending through the top end flap to the top panel and turns towards said side panel, said
8 tear line extending to said side panel, with said tear line in the bottom end flap and top
9 end flap being located at a sufficient distance from said side panel to permit containers to
10 be removed from each layer but not so far from said side panel as to allow containers to
11 automatically roll out of the opening when the dispenser flap is removed.

1 20. The carton loaded with a plurality of cylindrical containers of Claim 6,
2 which carton has a dispenser flap in one end of the carton which when removed creates
3 an opening which permits the removal of containers from each layer, said dispenser flap
4 being formed by a tear line that extends through the bottom end flap to the bottom panel
5 and turns toward the side panel upon which the carton is designed to rest when

6 dispensing containers, said tear line extending to said side panel, said tear line also
7 extending through the top end flap to the top panel and turns towards said side panel, said
8 tear line extending to said side panel, with said tear line in the bottom end flap and top
9 end flap being located at a sufficient distance from said side panel to permit containers to
10 be removed from each layer but not so far from said side panel as to allow containers to
11 automatically roll out of the opening when the dispenser flap is removed.

1 21. The carton loaded with a plurality of cylindrical containers of Claim 19, in
2 which the tear line in the bottom end flap curves downwardly from the bottom panel
3 towards the side panel upon the carton is designed to rest when dispensing containers
4 until it meets the tear line in the top end flap which extends upwardly to the top panel,
5 said curve in the tear line providing resistance to the containers automatically rolling out
6 of the opening when the dispenser flap is removed.

1 22. The carton loaded with a plurality of cylindrical containers of claim 21, in
2 which at least one finger flap is located adjacent the dispenser flap to facilitate the
3 removal of the dispenser flap.

1 23. The carton loaded with a plurality of cylindrical containers of Claim 19, in
2 which the dispenser is located in the end of the carton where the trailing flap of the
3 interlocking separator pad is located, with the trailing flap not extending into the opening
4 formed when the dispenser flap is removed so as to impede the removal of containers
5 from the opening.

1 24. A carton with two ends for carrying a plurality of cylindrical containers in
2 two layers with at least two rows in each layer and an interlocking separator pad for
3 keeping the layers of containers separate comprising:

4 (a) a carton having a bottom panel, top panel and foldably attached
5 adjoining side panels with one end of the carton being an interlocking end, with each end
6 of carton being closed by a top end flap foldably attached to the top panel, a bottom end

7 flap foldably attached to the bottom panel and a side end flap which is foldably attached
8 to each side panel, with each side end flap having an end remote from the side panel to
9 which said side end flap is attached, with each remote end on the side end flaps on the
10 interlocking end of the carton having a slit, with each end of the carton having been
11 closed by gluing the top end flap and bottom end flap to the side end flaps on that end of
12 the carton; and

13 (b) an interlocking separator pad with two ends, of which one end is
14 an interlocking end which has a foldably attached leading flap, said leading flap
15 extending through the slits in the side end flaps on the interlocking end of the carton and
16 interlocked, with the leading flap folded into a plane perpendicular to the bottom panel of
17 the carton, said pad having a foldably attached trailing flap which is folded into a plane
18 perpendicular to the bottom panel of the carton and extending at least close to a panel of
19 the carton that is parallel to said pad so as to better separate and support the cylindrical
20 containers to be carried in the carton.

1 25. A carton with two ends for carrying a plurality of cylindrical containers in
2 two layers with at least two rows in each layer and an interlocking separator pad for
3 keeping the layers of containers separate comprising:

4 (a) a carton having a bottom panel, top panel and foldably attached
5 adjoining side panels, with each end of the carton being an interlocking end, with each
6 end of the carton being closed by a top end flap foldably attached to the top panel, a
7 bottom end flap foldably attached to the bottom panel and a side end flap which is
8 foldably attached to each side panel, with each side end flap having an end remote from
9 the side end panel to which said side end flap is attached, with each remote end on each
10 side end flap on each end of the carton having a slit, with each end of the carton having
11 been closed by gluing the top end flap and bottom end flap to the side end flaps on that
12 end of the carton; and

13 (b) an interlocking separator pad with two ends, each of which is an
14 interlocking end which has a foldably attached leading flap, with each said leading flap

1 extending through the slits in the side end flaps on an end of the carton, with each leading
2 flap folded into a plane perpendicular to the pad.
3

1 26. The carton and interlocking separator pad of Claim 24, for carrying a
2 plurality of containers with each container having a diameter, said carton having a
3 dispenser flap which when removed provides an opening which permits the removal of
4 the containers from each layer, said dispenser flap formed by a bottom tear line in a side
5 panel which is at least substantially parallel to an end of the carton and a top tear line
6 spaced apart from said bottom tear line and is at least substantially parallel thereto, said
7 bottom and top tear lines extending into the adjoining top panel and interconnecting each
8 other and extending into the adjoining bottom panel and interconnecting each other, said
9 parallel tear lines being spaced apart by a distance sufficient to permit the removal
10 through said opening of a container by a person.

1 27. The carton and interlocking separator pad of Claim 26, in which said
2 bottom tear line in the side panel of the carton is located from the closest side end flap by
3 a distance which is sufficient to prevent any container in the carton adjacent to the closest
4 side end flap from rolling out of the opening formed when the dispenser flap is removed
5 when the carton is resting on the end where said side end flap is located, but with said
6 bottom tear line not being so far from said closest side end flap to prevent the removal
7 through said opening of a container adjacent said closest side end flap.

1 28. The carton and interlocking separator pad of Claim 27, in which the tear
2 lines that extend into the adjoining bottom panel and adjoining top panel of the carton
3 extend into each said panel far enough to permit a person to grasp the adjacent end of a
4 container through the opening formed when the dispenser flap is removed.

1 29. The carton and interlocking separator pad of Claim 28, in which a tear line
2 interconnects said bottom tear line and top tear line in said side panel of the carton to
3 facilitate opening said dispenser flap.

1 30. The carton and interlocking separator pad of Claim 29, which has at least
2 one finger flap in the dispenser flap adjacent to the tear line connecting the top and
3 bottom tear lines together in said side panel to facilitate tearing the dispenser flap open.

1 31. The carton and interlocking separator pad of Claim 30, which has a tear
2 line in the bottom panel between the bottom tear line and the closest bottom flap and a
3 tear line in the top panel between the bottom tear line and the closest top end flap to
4 enable a person to move that portion of the side panel between the bottom tear line and
5 the closest side end flap a sufficient distance to permit the easy removal of containers
6 from the opening formed by the removal of the dispenser flap.

1 32. The carton and interlocking separator pad of Claim 24, which carton has a
2 dispenser flap in one end of the carton which when removed creates an opening which
3 permits the removal of containers from each layer, said dispenser flap being formed by a
4 tear line that extends through the bottom end flap to the bottom panel and turns toward
5 the side panel upon which the carton is designed to rest when dispensing containers, said
6 tear line extending to said side panel, said tear line also extending through the top end
7 flap to the top panel and turns towards said side panel, said tear line extending to said
8 side panel, with said tear line in the bottom end flap and top end flap being located at a
9 sufficient distance from said side panel to permit containers to be removed from each
10 layer, but not so far from said side panel as to allow containers to automatically roll out
11 of the opening when the dispenser flap is removed, with said trailing flap not extending
12 into the opening formed when the dispenser flap is removed.

1 33. The carton and interlocking separator pad of Claim 25, which carton has a
2 dispenser flap in one end of the carton which when removed creates an opening which

1 permits the removal of containers from each layer, said dispenser flap being formed by a
2 tear line that extends through the bottom end flap to the bottom panel and turns toward
3 the side panel upon which the carton is designed to rest when dispensing containers, said
4 tear line extending to said side panel, said tear line also extending through the top end
5 flap to the top panel and turns towards said side panel, said tear line extending to said
6 side panel, with said tear line in the bottom end flap and top end flap being located at a
7 sufficient distance from said side panel to permit containers to be removed from each
8 layer, but not so far from said side panel as to allow containers to automatically roll out
9 of the opening when the dispenser flap is removed.

1 34. A blank for a carton with two ends for carrying a plurality of cylindrical
2 containers in two layers with at least two rows in each layer and an interlocking separator
3 pad for keeping the layers of containers separated comprising:

4 (a) said carton blank having a bottom panel, top panel and foldably
5 attached adjoining side panel, with one end of the carton being an interlocking end, with
6 each end of the carton being closed by a top end flap foldably attached to the top panel, a
7 bottom end flap foldably attached to the bottom panel and a side end flap which is
8 foldably attached to each side panel, with each side end flap on the interlocking end of
9 the carton having a remote end which has a slit, with each end being designed to be
10 closed by gluing the top end flap and bottom end flap to the side end flaps on that end of
11 the carton; and

12 (b) an interlocking separator pad with two ends, one of which is an
13 interlocking end which has a foldably attached leading flap, said leading flap being
14 designed to be inserted through the slits in the side end flaps on the interlocking end of
15 the carton and interlocked, with the leading flap being designed to be folded into a plane
16 perpendicular to the bottom panel of the carton, said pad having a foldably attached
17 trailing flap which is designed to be folded into a plane perpendicular to the bottom panel
18 of the carton and to extend at least close to a panel of the carton that is parallel to said pad
19 so as to better separate and support the cylindrical containers to be carried in the carton.

1 35. A blank for a carton with two ends for carrying a plurality of cylindrical
2 containers in two layers with at least two rows in each layer and an interlocking separator
3 pad for keeping the layers of containers separated comprising:

4 (a) said carton blank having a bottom panel, top panel and foldably
5 attached adjoining side panel, with both ends of the carton being interlocking ends, with
6 each end of the carton being closed by a top end flap foldably attached to the top panel, a
7 bottom end flap foldably attached to the bottom panel and the side end flap which is
8 foldably attached to each side panel, with each side end flap having a remote end which
9 has a slit with each end being designed to be closed by gluing the top end flap and bottom
10 end flap to the side end flap on that end of the carton; and

11 (b) an interlocking separator pad with two ends with each end being an
12 interlocking end which has a foldably attached leading flap, said leading flap being
13 designed to be inserted through the slits in the side end flaps on an end of the carton and
14 interlocked, with each leading flap being designed to be folded into plane perpendicular
15 to the bottom panel of a carton.
16

1 36. A blank for a carton with two ends for carrying a plurality of cylindrical
2 containers in two layers with two rows in each layer and interlocking separator pad for
3 keeping the layers of containers separate comprising:

4 (a) a carton having a bottom panel, top panel and foldably attached
5 adjoining side panels with one end of the carton being an interlocking end, with each end
6 of carton being closed by a top end flap foldably attached to the top panel, a bottom end
7 flap foldably attached to the bottom panel and a side end flap which is foldably attached
8 to each side panel, with each side end flap on the interlocking end of the carton having an
9 end remote from the side panel to which said side end flap is attached, with each remote
10 end having a slit, with each end of the carton secured in the closed position by the top end
11 flap and bottom end flap being designed to be closed by gluing to the side end flaps on
12 each end of the carton; and

1 (b) an interlocking separator pad with two ends, with one end being an
2 interlocking end which has a foldably attached leading flap, with the leading flap
3 designed to be inserted through the slits in the side end flaps on the interlocking end of
4 the carton, with the leading flap being designed to be folded into a plane perpendicular to
5 the bottom panel of the carton and lodged between the side end flaps on the interlocking
6 end of the carton and the bottom end flap and top end flap, said pad having a foldably
7 attached trailing flap on the other end of the pad being designed to be folded into a plane
8 perpendicular to the bottom panel of the carton with said trailing flap extending close to a
9 panel of the carton that is parallel to said pad so as to better separate and support the
10 containers to be carried in the carton.